EUROPEAN PROFESSIONAL ASSOCIATION FOR TRANSGENDER HEALTH

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# The year in review Children and Adolescents

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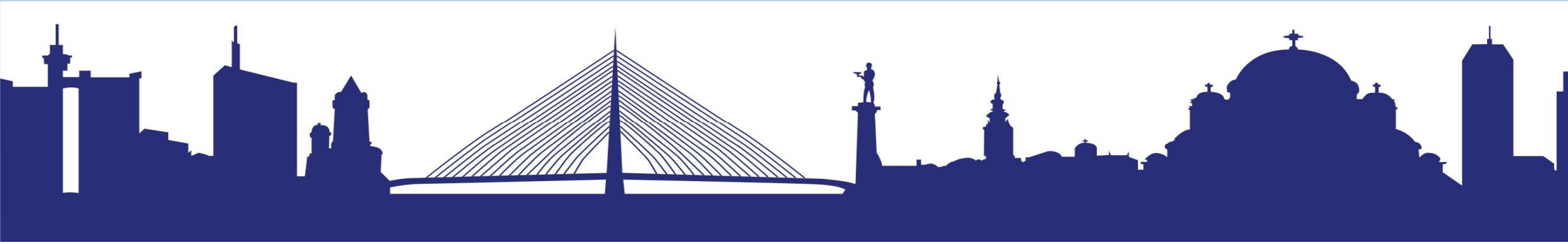

I.
DIAGNOSES OF GENDER INCONGRUENCE

II.
COMPLEXITIES AND MENTAL HEALTH PROBLEMS

III.
HEALTH CARE BARRIERS & EVALUATION OF TREATMENT PROTOCOLS

# I. DIAGNOSES OF GENDER INCONGRUENCE

- Diagnostic classification: ICD-11
- Altered sex ratio

REFERENCES

| Author | Study design | Instrument | Study sample | Control sample | Age range | GNRH-A/CST |
|---|---|---|---|---|---|---|
| *Winter et al.* 2016 | Cross-national | Survey (on proposal childhood GIC in ICD-11) | 241 (32,6%) | No | Not specified | / |
| *Beek et al.* 2017 | Cross-national | Survey (on children's GIC criteria) | 628<br>-522 transgender people<br>-89 HCP<br>-17 TG and HCP | No | Not specified | / |
| *Aitken et al.* 2015 | Cross-national/cross-clinical | Quantitative (on sex ratio) | 748 Toronto<br>420 Amsterdam | 6592 Toronto | 13-19 yrs (mean 16,66 yrs 1,7SD-6,14yrs, 1,59SD) | No information |
| *Olson et al.* 2015 | Cross-sectional (USA) | Survey: Implicit Association Test (on gender recognition) | 32<br>-20 natal males<br>-12 natal females | 32 controls<br>18 siblings | 5-12 yrs (mean 9 yrs, 2SD) | Socially transitioned |

# I. DIAGNOSES OF GENDER INCONGRUENCE

- Diagnostic classification: ICD-11
- Altered sex ratio

## RESULTS – *Winter et al.*

| Geographical location (participants) | Support GIC (n=115) | Oppose GIC (n=123) | *P* value |
|---|---|---|---|
| Australia and Oceania (8) | 1 | 8 | 0,006 |
| North America: Canada (21) | 7 | 14 | 0,120 |
| North America: USA (169) | 89 | 77 | 0,352 |
| Western Europe (29) | 14 | 15 | 0,856 |
| Other * (14) | 4 | 9 | 0,16 |

*Africa, Asia, Caribbean and Central America, Eastern Europe, Middel East, South America

- **PRO**

*-acces to care (79,1%)*

*-protected status (54,5%)*

*-facilitate reimbursement (54,7%)*

*-facilitate training and research (49,5%)*

- **CONTRA**

*-pathologizing (53,6%)*

*-stigmatizing/discrimating (50,4%)*

*-limited utility (39,0%)*

*-limited validity (34,1%)*

# RESULTS – *Winter et al.*

- Significant greater proportion of participants supported the use of non-disease 'Z' Codes *(p<0,001)*

- Location of GIC diagnosis:
  - 41,1% supported WHO proposal, in 'Conditions related to Sexual Health'
  - 7,5% in the 'Mental and Behavioural Disorder' chapter

- Significant proportion supported the name GIC: 51% agreed vs 13,7% opposed, *p<0,001*)

- *Beek et al.*

- Similar study in UK/Netherlands/Belgium: HCP and transgender participants
  - Majority agrees if removed from Mental Health chapter, it should be removed completely (42,9% vs 33,6%)
  - GID should change (58,4%), GIC is an improvement (63,0%)
  - Location in chapter dealing with conditions related to Sexual Health or 'Z code' is preverable.

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# RESULTS – *Aitken et al.*

*Number and percentage of adolescent referrals by group and time period (Toronto)*

| Time period | 1999–2005 | 2006–2013 |
|---|---|---|
| Gender dysphoria | | |
| Males (N/%) | 36 (67.9) | 73 (36.1) |
| Females (N/%) | 17 (32.1) | 129 (63.9) |
| Sex ratio (M : F) | 2.11:1 (p=0,013) | 1:1.76 (p<0,001) |
| Clinical controls (Mental health Center Toronto) | | |
| Males (N/%) | 1,601 (68.9) | 2,828 (66.2) |
| Females (N/%) | 721 (31.1) | 1,444 (33.8) |
| Sex ratio (M : F) | 2.22:1 (p<0,001) | 1.96:1 (p<0,001) |

- No significant difference in the percentage of females between Toronto and Amsterdam in both periods.
- Inversion of sex ratio the second period in both clinical settings.

# I. DIAGNOSES OF GENDER INCONGRUENCE

# II. COMPLEXITIES AND MENTAL HEALTH PROBLEMS

# II. COMPLEXITIES AND MENTAL HEALTH PROBLEMS

- Mental health problems in transgender youth
  - Psychiatric
  - Psychosocial
  - Disordered eating behaviors
  - Non-suicidal self injury
  - Suicidality
- Protecting and risk factors

- Focus on sexuality and fertility preservation

## REFERENCES

| Author | Study design | Instrument | Study sample | Control sample | Age range | GNRH-A/CST |
|---|---|---|---|---|---|---|
| *Watson et al.* 2016 | Cross sectional (New Zeeland) | Online survey (on eating disorders) | 106<br>-45 transboys<br>-12 transgirls<br>-49 non-binary | No | 14-18 yrs | No information |
| *Guss et al. 2016* | Cross sectional (USA) | Survey in schools (on eating disorderes | 67 trans youth | Yes<br>cisgender male 1117<br>cisgender female 1289 | Mean 16 yrs (only 4>18 yrs) | No information |
| *Arcelus et al. 2016* | Cross sectional (GB) | Questionnaires (on NSSI) | 268<br>-121 natal female<br>-136 natal male | No | 17-25 yrs (mean age 19,9 yrs 2,1SD) | CST (13,8%)<br>GnRH-A (15,6%) |
| *Peterson et al. 2016* | Retrospective study (USA) | Chart review (on Self harm, suicidality, body perception) | 96<br>-54 transmale<br>-31 transfemale<br>-15 nonbinary | No | 12-22 yrs, (mean 17,1 yrs 2,3SD) | Before treatment |

| Author | Study design | Instrument | Study sample | Control sample | Age range | GNRH-A/CST |
|---|---|---|---|---|---|---|
| *Veale et al.* 2016 | Cross sectional (Canada) | Survey online (on mental health disparities) | 923<br>*323 (14-18yrs)<br>-32 transgirls<br>-140 transboys<br>-128 nonbinary<br><br>*600 (19-25yrs) | Yes | 14-25 yrs | No information |
| *Olson et al.* 2015 | Cross sectional (USA) | Survey (on psychosocial characteristics) | 101 | No | 12-24 yrs, (mean 19,2 yrs 2,9 SD) | Before treatment |
| *de Vries et al.* 2016 | Cross national (Amsterdam) | Survey (on emotional/beha-vioral aspects)<br>CBCL<br><br>YSR | 112<br>-63 males<br>-49 females<br><br>106<br>-58 males<br>-48 females | Yes (Toronto<br><br>142<br>-75 males<br>-67 females<br><br>138<br>-71 males<br>-67 females | 13-18 yrs | Before treatment |

## RESULTS – Mental health disparities among Canadian transgender youth (14-18yrs)

-*Veale et al.*

| | BCAHS (2014) | | Trans Youth Health Survey | | | Trans Youth Health Survey (transboys, transgirls, nonbinary-323) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | In school | | In BC schools | | | Entire sample | | | |
| | M (SD)/% | n | M (SD)/% | Statistical test | Effect size | n | M (SD)/% | Statistical test | Effect size |
| **Emotional Distress (past month)** | | | | | | | | | |
| stress/strain/pressure | 2.87 (1.21) | 51 | 3.90 (1.10) | t(50) = 6.68** | d = .85 | 209 | 4.04 (1.07) | t(208) = 15.81** | d = .97 |
| Felt discouraged or hopeless | 2.16 (1.32) | 51 | 3.20 (1.39)b | t(50) = 5.34** | d = .79 | 208 | 3.41 (1.32)b | t(207) = 13.68** | d = .95 |
| General mental health | 3.15 (.84) | 51 | 2.00 (.85) | t(50) = 9.66** | d = −1.37 | 237 | 1.79 (.79) | t(236) = 26.50** | d = −1.62 |
| **Suicidality (past year)** | | | | | | | | | |
| Considered | **13.0%** | 51 | 64.7% | χ2(1) = 120.56** | RR = 4.98 | 199 | **65.2%** | χ2(1) = 472.56** | **RR = 5.02** |
| Times attempted | .11 (.47) | 50 | .46 (.76) | t(49) = 3.25** | d = .74 | 199 | .65 (1.00) | t(198) = 7.62** | d = 1.15 |
| At least one attempt | **6.5%** | 50 | 32.0% | χ2(1) = 48.89** | RR = 4.92 | 199 | **36.1%** | χ2(1) = 290.64** | **RR = 5.55** |
| **Self-harm (past year)** | | | | | | | | | |
| Number of times | .41 (1.03) | 51 | 1.84 (1.35) | t(50) = 7.56** | d = 1.39 | 231 | 1.87 (1.27) | t(230) = 17.47** | d = 1.42 |
| At least once | **16.5%** | 51 | 71.2% | χ2(1) =104.41** | RR = 4.31 | 231 | **74.9%** | χ2(1) = 540.93** | **RR = 4.54** |

RR: risk ratio

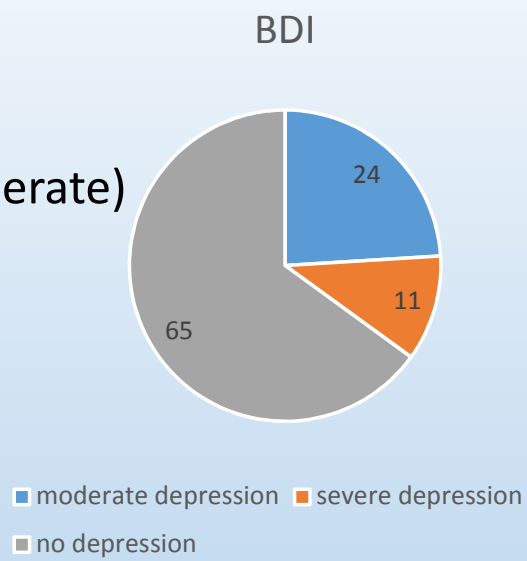
- Transgender 14-18 year olds had 5 times the risk of suicidal thoughts
- 65,2% having seriously considered suicide in the past year
- 75% transgender youth reported self harming in the past year

- *Non-binary* youth tended to report lower levels of overall mental health condition and higher incidence of self harm
- *Transboys* reported significant higher incidence of self harm than transgirls
- *Non-binary* youth tended to report higher levels of stress and sadness than transboys

RESULTS: Depression, suicide attempts/thoughts, self harm behavior

- *Olson et al.* (101-no control)

Beck Depression Inventory
- 35% depressive disorder (11% severe, 24% moderate)
- 51% suicidal thoughts
- 30% suicide attempt (at least once)




- *Peterson et al.* (96-no control)

- 30% suicide attempt
- 38% depressive disorder
- 41,8% self harm behavior

- *Arcelus et al.* (268 – no control)

- 46,3% lifetime NSSI
- 28,73% current NSSI (past few months)

## RESULTS: Eating disorders and weight perception

- *Guss et al.*

| | Transgender, n 67(%) | Cisgender male, n 117(%) | Cisgender female, n 1298 (%) |
|---|---|---|---|
| Past 30 days | | | |
| Fasting >24 hours | **6 (9.5)*** | 40 (3.8) | 131 (10.5) |
| Vomiting after meals | 2 (3.3) | 10 (1) | 73 (5.9) |
| Diet pill use | **3 (4.8)*** | 11 (1) | 38 (3.1) |
| Laxative use | **3 (4.8)*** | 11 (1) | 38 (3.1) |
| Weight perception | n = 66 | n = 1,111 | n = 1,287 |
| Concordant | 28 (43.4) | 595 (53.6) | 730 (56.7) |
| Feels overweight but is not | 16 (24.2) | 195 (17.6) | 310 (24.1) |
| Feels healthy/underweight but is not | **22 (33.3)*** | 321 (28.9) | 247 (19.2) |

- No significant difference between trans youth and cisgender female for
  - vomiting after meal
  - for fasting >24 hours
  - diet pill use
  - laxative use
- Transgenders had higher odds of perceiving themselfs as healthy weight or underweight when they were obese or had overweight

# RESULTS: Eating disorders and weight perception

– *Watson et al.*

| 14–18 year old transgender youth | transboys/% | transgirls/% | non binary/% | *p* |
|---|---|---|---|---|
| Binge eating | 45 (37.2) | 12 (42.9) | 49 (44.5) | 0.67 |
| Lose weight by fasting | 53 (43.1) | 13 (40.6) | 59 (52.7) | 1.09 |
| Lose weight by pills or speed | 8 (6.5) | 1 (3.6) | 9 (8.0) | 0.37 |
| Lose weight by laxatives | 3 (2.4) | 1 (3.6) | 8 (7.1) | 0.70 |
| Lose weight by vomiting | **13 (10.6)*** | 5 (17.9) | **28 (25.0)*** | 4.33 |

- High incidence of binge eating and losing weight by fasting in both transboys and non-binary adolescents.
- Only significance between transboys and non-binary adolescents regarding weight loss by vomiting

# RESULTS: Vulnerabilities: risk- and protecting factors

- There is a higher frequency of suicide attempts in *transgender youth* with a desire for weight change (in terms of weight gain or weight loss)-*Peterson et al.*
- More transgender youth with a history of self harm are more likely to endorse a suicide attempt -*Peterson et al.*
- More *transmale* report a history of suicide attempt or are more vulnerable to current NSSI -*Peterson et al.; Arcelus et al.*
- More general psychopathology is a predictor for the lifetime presence of NSSI -*Arcelus et al.*
- Self-esteem, transphobia, interpersonal problems were significant predictors for psychopathology (=predictor for lifetime NSSI), but were not influenced by the use of cross sex hormones -*Arcelus et al.*
- *Non-binary* youth are tending to report lower levels of overall mental health and higher incidence of self-harm in the past year -*Veal et al.*

# RESULTS: Vulnerabilities: risk- and protecting factors

- Enacted stigma (discrimination, harassment) result in higher risks to binge eating, fasting or vomiting to lose weight – *Watson et al.*
- *Non-binary* youth are more at risk for vomiting to lose weight – *Watson et al.*
- Family connectedness, school connectedness, caring friends and social support are linked to lower risks to disordered eating (5x less) – *Watson et al.*
- Poor peer relations was the strongest predictor for CBCL and YSR behavioral and emotional problems (internalizing/externalizing) in *transgender youth* - *de Vries et al.*

# II. COMPLEXITIES AND MENTAL HEALTH PROBLEMS

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# REFERENCES

| Author | Study design | instrument | Study sample | Control sample | Age | GNRH-A/CST |
|---|---|---|---|---|---|---|
| *Nahata et al. 2017* | Retrospective study (USA) | Electronic review (on fertility counseling) | 72<br>-50 trans male<br>-22 trans female | No | 9-18 yrs<br>Mean | 27 GNRH-A<br>40 CST |
| *Bungener et al. 2017* | Cross sectional (Netherlands) | Questionnaire (on sexuality) | 137<br>-60 transgirls<br>-77 transboys | yes | Mean 14,11 yrs (2,21 SD)<br>Mean 15,14 (2,09 SD) | Before treatment |

# RESULTS: Fertility preservation and sexual experience

– *Nahata et al. (72)*

- 45% of subjects mentioned a desire or plan to adopt
- 21% said they had never wanted to have children.
- 2 (transgirls 13-15 yrs) started fertility preservation
- 70 declined preservation

- Reasons (74%)
  - *45,2%: adoption*
  - *21,9%: never want to have children*
  - *8,2%: too expensive*
  - *1,4%: concerns about potentially delaying hormone treatment*
  - *1,4% masturbating would be too uncomfortable*

# RESULTS: Fertility preservation and sexual esperience

– *Bungener et al.*

| Experience | Age 12–14 y TGA (N=35),(%) | GP(N=1807),(%) | *p* | Age 15–17 y TGA(N=75),(%) | GP(N=2013),(%) | *p* |
|---|---|---|---|---|---|---|
| *Has been in love* | 24 (69) | 1598 (88) | .003 | 60 (82) | 1861 (92) | .001 |
| *Romantic relationship* | 11 (32) | 1226 (67) | <.001 | 49 (66) | 1529 (76) | .04 |
| *French kissing* | 1 (3) | 774 (42) | <.001 | 46 (62) | 519 (75) | .004 |
| *Petting while undressed* | 2 (6) | 56 (31) | .001 | 32 (43) | 1388 (69) | <.001 |
| *Sexual intercourse* | 1 (3) | 134 (7) | .49 | 5 (7) | 795 (40) | <.001 |

- Transboys had more sexual experience than transgirls.
- Compared with the general population (GP); transgender adolescents (TGA) were both sexually and romantically less experienced.

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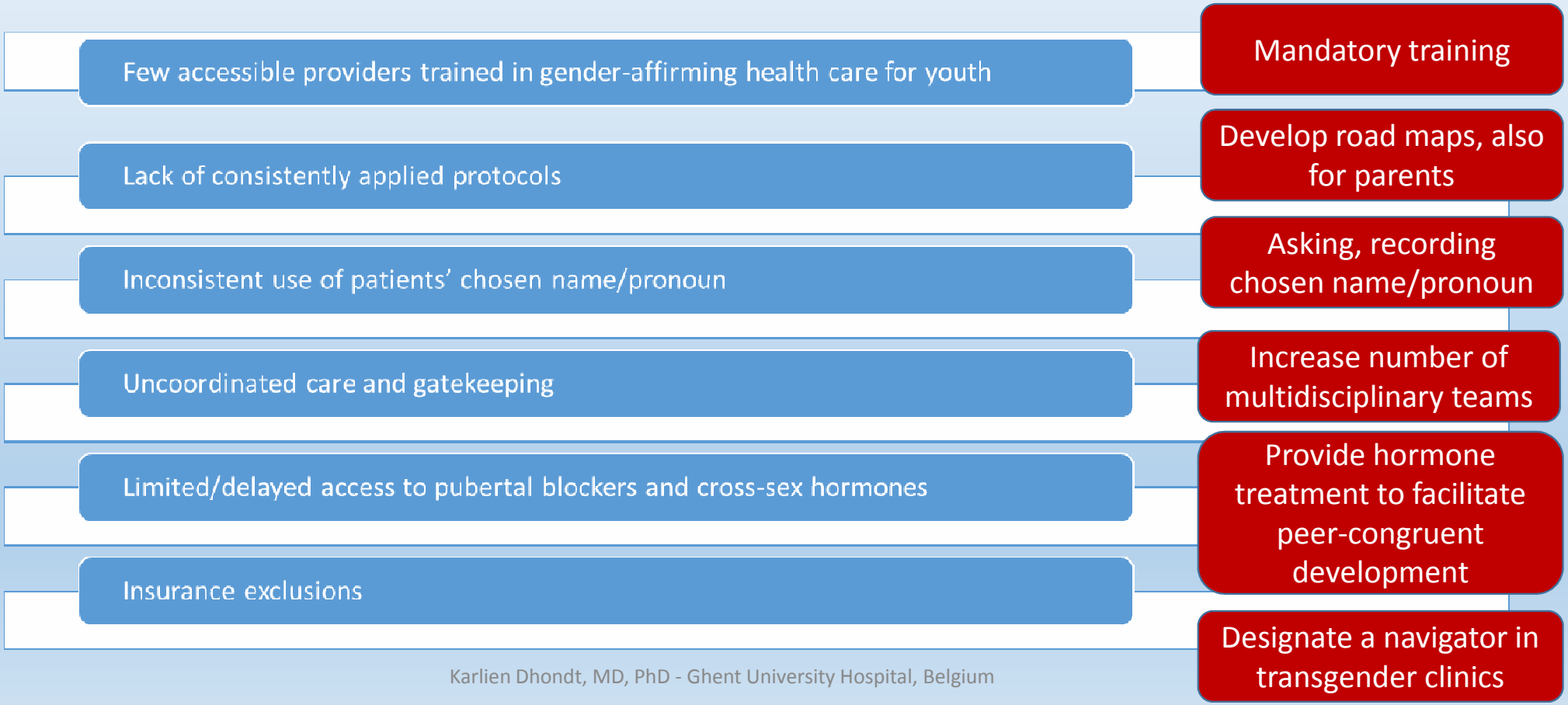
# III. HEALTH CARE BARRIERS & EVALUATION OF TREATMENT PROTOCOLS

- Focus on the needs in health care according to the transgender youth community
- Focus on social transition in young children

| Author | Study design | Instruments | Study sample | Control sample | Age | GNRH-A/CST |
|---|---|---|---|---|---|---|
| *Gridley et al. 2016* | Cross-sectional (USA) | Semi structured interview, survey (on experiences in gender affirming health care) | 65<br>-15 youth<br>*3 trans female<br>*7 trans male<br>*2 binary<br><br>-50 caregivers<br>*40 female<br>*7 male<br>*1 trans male<br>*2 ? | No | 14-22 yrs (mean 18)<br><br>29-71 yrs (mean 47) | 2 GNRH-A<br>9 CRT |
| *Vrouenraets et al. 2016* | Cross-sectional (Netherlands) | Qualitative semi-structured interview (on puberty supression) | 13<br>-5 transgirls<br>-8 transboys | Yes<br>Professionals | 13-18yrs (mean 16yrs 11 months) | 12 GNRH-A |

# RESULTS: Participant's cited barriers

- *Gridley et al.*



## RESULTS: Three themes

– *Vrouenraets et al.*

- The difficulty of determining what is an appropriate lower age limit for starting puberty suppression.
  - Most adolescents saw this as a dilemma
- The lack of data on the long-term effects of puberty suppression
  - No impact on starting puberty suppression for adolescents
  - For most clinicians: yes
- The role of the social context
  - Social media, television
  - An imposed stereotype (binary concept)
    - divers

# III.
# HEALTH CARE BARRIERS & EVALUATION OF TREATMENT PROTOCOLS

- Focus on the needs in health according to the transgender youth community

- Focus on social transition in young children

REFERENCES

| Author | Study design | Instruments | Study sample | Control sample | Age | GNRH-A/CST |
|---|---|---|---|---|---|---|
| *Durwood et al. 2016* | Longitudinal study (USA) | PROMIS scale (on anxiety, depression)<br><br>Global Self-Worth scale | 63<br><br>116 | Yes<br>63 controls<br>38 siblings<br><br>122 controls<br>72 siblings | 9-14yrs<br><br>6-14 yrs | 18GNRH-A<br>5CST<br>39 only socially transitioned |
| *Olson et al. 2016* | Cross-sectional (USA) | PROMIS scale (on anxiety and depression) | 73<br>-22 natal females<br>-51 natal maels | Yes<br>73 controls<br>49 siblings | 3-12 yrs (mean 7,7yrs 2,2SD) | prepubescent<br>Socially transitioned |

## RESULTS: Anxiety, depression, self worth in socially transitioned children

– *Durwood et al.*

| *T-scores* | Transgender | Controls | Siblings |
|---|---|---|---|
| All participants, n | 63 | 63 | 38 |
| Depression M/% | 48.7 (9.4) | 46.4 (8.0) | 47.9 (7.9) |
| In clinical range, % | 6 | 2 | 3 |
| Anxiety M/% | 52.0 (9.6) | 49.0 (7.7) | 52.8 (10.5) |
| In clinical range, % | 13 | 3 | 16 |
| *Parent report* | | | |
| Depression | 50.2 (8.8) | 49.4 (7.8) | 48.9 (7.1) |
| In clinical range, % | 6 | 3 | 0 |
| Anxiety | 54.9 (9.0) | 49.6 (8.6) | 51.0 (8.2) |
| In clinical range, % | 22 | 5 | 8 |

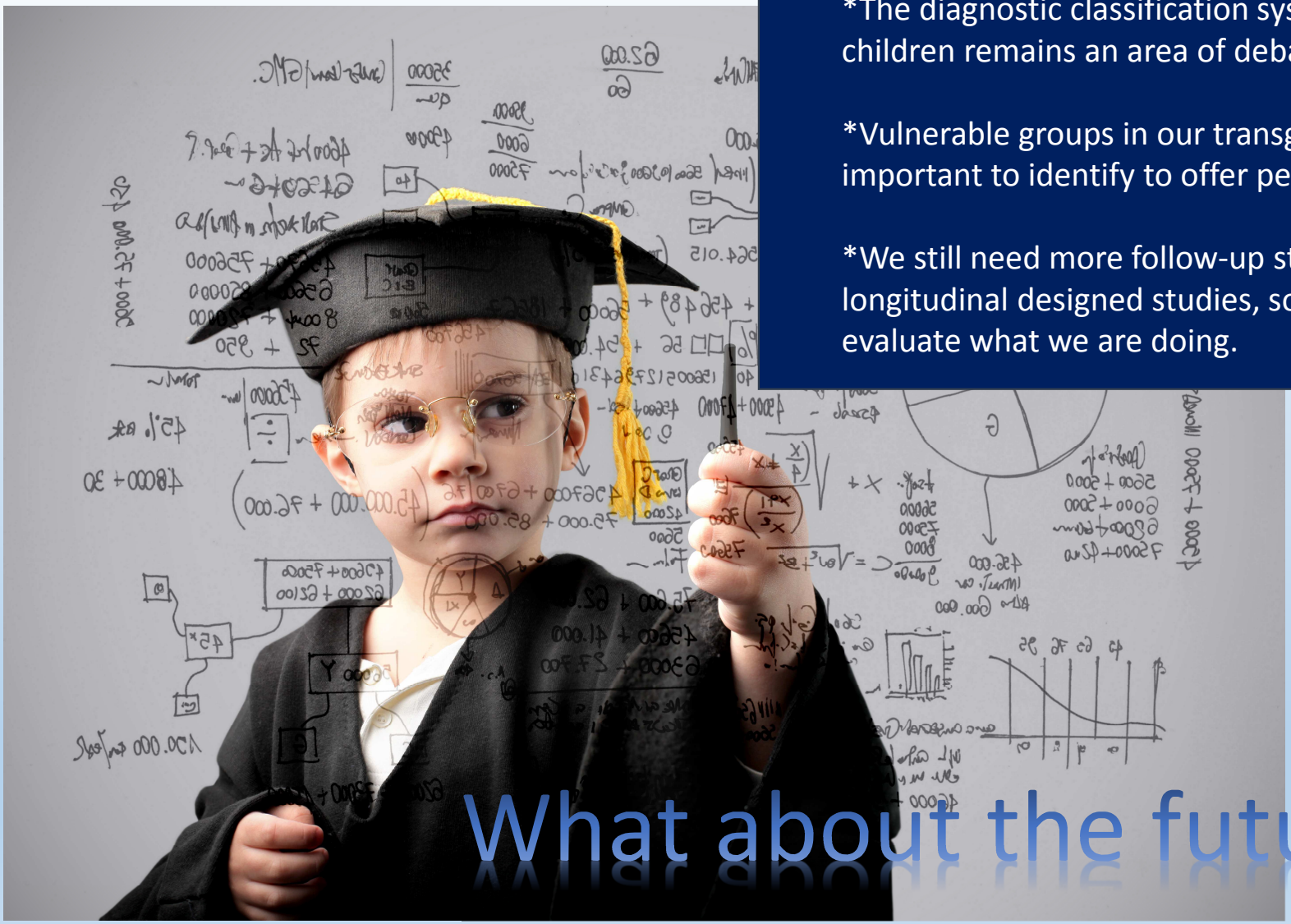
- No differences in *self-reported* depressive symptoms or anxiety symptoms across the 3 groups. No significant differences with the national average (for all 3 groups)
- No differences in self worth between the 3 groups
- No differences in *parent's reports* on depressive symptoms
- Higher *parent's report* on anxiety symptoms in transitioned children, higher than average anxiety (national) only for the transitioned children
- No differences between groups whether they were with or without hormonal intervention

# RESULTS: Anxiety and depression – *Olson et al.*

Anxiety and Depression: t (norm t=50) Scores by Sex and Sample

| | *Transgender (n = 73)* | *Controls (n = 73)* | *Siblings (n = 49)* | *P* |
|---|---|---|---|---|
| Depression | 50.1 | 48.4 | 49.3 | .320 |
| Anxiety | 54.2 | 50.9 | 52.3 | .057 |
| Depression by gender | | | | .979 |
| Natal boys | 49.8 | 48.0 | 48.9 | |
| Natal girls | 50.8 | 48.5 | 49.9 | |
| Anxiety by gender | | | | .664 |
| Natal boys | 53.7 | 51.1 | 52.8 | |
| Natal girls | 55.3 | 50.8 | 51.5 | |

- Socially transitioned transgender children who are supported in their gender identity have developmentally normative levels of depression, with tendencey to minimal elevation of anxiety
- *Comment on PROMIS scale* (not validated <5 yrs) and a rather homogeneous group (with high income) – *letter to the editor*



# What about the future ?

*The diagnostic classification system for GIC in children remains an area of debat.

*Vulnerable groups in our transgender youth are important to identify to offer personalized care.

*We still need more follow-up studies, longitudinal designed studies, so we can better evaluate what we are doing.